

**EAST CAROLINA UNIVERSITY – CURRICULUM VITAE****Name:** Daniel Lee Dickerson**Address:**

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**Experience:**

<i>Dates of Appointment</i>	<i>Names of Institutions</i>	<i>Rank</i>
Aug 2015 - present	East Carolina University, Greenville, NC	Associate Professor of Science Education
June 2014 – May 2015	Old Dominion University, Norfolk, VA	Graduate Program Director for the Department of STEM Education and Professional Studies
May 2009 – May 2015	Old Dominion University, Norfolk, VA	Associate Professor of Science Education
Jan 2005 – May 2009	Old Dominion University, Norfolk, VA	Assistant Professor of Science Education
Aug 2003 – Jan 2005	College of Charleston, Charleston, SC	Assistant Professor of Science Education
July 2000 – Aug 2003	North Carolina State University, Raleigh, NC	Graduate Research Assistant
Aug 1998 – July 2000	Jordan High School, Durham, NC	High School Science Teacher

**Education:****Bachelor's Degree:**

Name of Degree: BS

Year conferred: 1998

Degree-granting Institute: University of North Carolina at Chapel Hill

Major Field of Study: Secondary Science Education

**Master's or First Professional Degree:**

Name of Degree: MS

Year conferred: 2001

Degree-granting Institute: North Carolina State University

Major Field of Study: Science Education

Thesis: The Effects of Fieldwork-Based Professional Development On an Experienced Earth/Environmental Science Teacher: A Case Study

Doctoral Degree:

Name of Degree: Ph.D.

Year conferred: 2003

Degree-granting Institute: North Carolina State University

Major Field of Study: Science Education

Minor Field of Study: Earth/Environmental Science

Dissertation: Understanding the Relationship between Science and Faith, the Nature of Science, and Controversial Content Understandings

**Honors, Awards, and Prizes:**

2015 – Nominated for the Darden College of Education Most Collaborative Grant Award

2014 - Invited to attend the GeoProgressions workshop, “Developing Learning Progressions for Maps, Geospatial Technology, and Spatial Thinking”, scheduled for October 9-12, 2014 in Washington, D.C. held at National Geographic Society headquarters in Washington DC.

2014 - ASTE Award II: Outstanding Mentor – Nominated for an international award sponsored by the Association of Science Teacher Educators

2014 - Elected to Gates County Board of Education for a four-year term in District 1 (Gatesville, Gates County, North Carolina)

2014 - Darden College of Education Largest Grant Award

2011 - Neil Miner Award – Nominated for a national award sponsored by the National Association of Geoscience Teachers for Outstanding Earth Science Educator.

2009 - Old Dominion University Shining Star Award - Faculty and staff members were nominated to receive this award by their students for exhibiting extraordinary service to students academically, professionally, or personally inside and outside of the classroom setting.

2008 - North Carolina Medallion Award for Outstanding Volunteer Service (Gates County) – My wife and I were honored by the North Carolina Commission on Volunteerism and

Community Service in the Office of the Governor. This award is considered a “prestigious statewide volunteer award”.

2008 - Children, Youth, and Families Award – My wife and I were honored by the Communities In Schools of the Northeast (CISNE). CISNE is committed to meeting the needs of our youth and families. They work collaboratively with schools, agencies, and organizations by connecting community resources to ensure that our youth stay in school, learn needed skills, and prepare them for post secondary education and careers. CISNE is an affiliate of Roanoke Economic Development, Inc., the nonprofit subsidiary of Roanoke Electric Cooperative in Rich Square, North Carolina. They are proud to be a part of the nation’s largest stay-in school network.

2000 - Received competitive funding as a classroom high school teacher from the Durham Public Education Network for the creation and implementation of two Earth Science laboratory activities

1999-2000 - Selected as a member of the Regional Screening Committee for North Carolina Teaching Fellows

1999 - Received a ‘Project Tomorrow Grant’ as a classroom high school teacher to improve environmental science education

1998 – Received a North Carolina Teaching License – Secondary Science

1994 - North Carolina Teaching Fellow Scholarship Recipient

### **Teaching:**

Year	Semester	Institution	Credit Hours	Abbreviated Title	# of Sections	Fields
2003	Fall	CofC	3	EDEE 327	1	Science Ed
2003	Fall	CofC	3	EDEE 432	2	Science Ed
2004	Spring	CofC	3	EDEE 368	2	Science Ed
2004	Spring	CofC	3	EDEE 384	1	Science Ed
2004	Fall	CofC	3	EDEE 368	1	Science Ed
2004	Fall	CofC	3	EDEE 670	1	Science Ed
2004	Fall	CofC	12	EDEE 450	1	Science Ed
2004	Fall	CofC	9	EDEE 698	1	Science Ed
2005	Spring	ODU	3	ECI 434/534 (Elementary Science Methods)	2	Science Ed
2005	Fall	ODU	3	ECI 434/534	1	Science Ed
2005	Fall	ODU	4	ECI 454/554 (Secondary Science Methods)	1	Science Ed

2006	Spring	ODU	3	ECI 434/534	1	Science Ed
2006	Spring	ODU	4	ECI 454/554	1	Science Ed
2006	Fall	ODU	3	ECI 434/534	1	Science Ed
2006	Fall	ODU	4	ECI 454/554	1	Science Ed
2006	Fall	ODU	3	ECI 740/840 (Critical Issues: Curriculum Research)	1	Curriculum and Instruction
2007	Spring	ODU	3	ECI 434/534	1	Science Ed
2007	Spring	ODU	4	ECI 454/554	1	Science Ed
2007	Fall	ODU	3	ECI 740/840	1	Curriculum and Instruction
2007	Fall	ODU	3	ECI 636 (Problems in Education)	1	Science Ed
2007	Fall	ODU	3	ECI 434/534	1	Science Ed
2007	Fall	ODU	4	ECI 454/554	1	Science Ed
2008	Spring	ODU	4	ECI 454/554	1	Science Ed
2008	Summer	ODU	3	ECI 795/895 (Topics in Education)	1	Science Ed
2008	Fall	ODU	3	ECI 434/534	1	Science Ed
2008	Fall	ODU	3	ECI 454/554	1	Science Ed
2008	Fall	ODU	1	ECI 483/583 (Methods Practicum)	1	Science Ed
2008	Fall	ODU	3	ECI 895	3	Science Ed
2009	Spring	ODU	3	ECI 434/534	1	Science Ed
2009	Spring	ODU	3	ECI 454/554	1	Science Ed
2009	Spring	ODU	1	ECI 483/583	1	Science Ed
2009	Spring	ODU	3	ECI 895 (Independent Study)	1	Science Ed
2009	Spring	ODU	3	ECI 897 (Independent Study)	1	Science Ed
2009	Summer	ODU	3	ECI 897	1	Science Ed
2009	Fall	ODU	3	ECI 454/554	1	Science Ed
2009	Fall	ODU	3	ECI 740/840	1	Curriculum and Instruction
2010	Spring	ODU	1	ECI 695 (Independent	1	Science Ed

				Study)		
2010	Spring	ODU	3	ECI 897	1	Science Ed
2010	Summer	ODU	3	ECI 895	1	Science Ed
2010	Fall	ODU	3	ECI 654	1	Science Ed
2010	Fall	ODU	3	ECI 740/840	1	Curriculum and Instruction
2011	Spring	ODU	3	STEM 434/534	1	Science Ed (Teletechnet)
2011	Spring	ODU	3	STEM 454/554	1	Science Ed
2011	Summer	ODU	3	TLCI 895 (Grant Writing)	1	Teaching and Learning
2011	Summer	ODU	3	TLCI 895 (Grant Management)	1 (n=1)	Teaching and Learning
2011	Fall	ODU	3	STEM 454/554	1	Science Ed
2011	Fall	ODU	3	STEM 534	1 (n=2)	Science Ed
2011	Fall	ODU	3	STEM 895	1 (n=1)	Science Ed
2012	Spring	ODU	3	STEM 454/554	1	Science Ed
2012	Spring	ODU	3	STEM 534	1(n=1)	Science Ed
2012	Fall	ODU	3	STEM 720/820 (STEM Educational Foundations)	1	STEM Ed (web-based, asynchronous)
2012	Fall	ODU	3	STEM 454/554	1	Science Ed
2012	Fall	ODU	3	STEM 896 (STEM Ed Res)	2 (n=2)	STEM Ed
2013	Spring	ODU	3	STEM 434/534	2	STEM Ed
2013	Spring	ODU	3	TLCI 895 (Science and Creativity)	1 (n=1)	STEM Ed
2013	Summer	ODU	3	TLCI 895 (Grant Writing)	1	Teaching and Learning
2013	Fall	ODU	3	STEM 454/554	1	STEM Ed
2013	Fall	ODU	3	STEM 720/820	1	STEM Ed

2014	Spring	ODU	3	STEM 434/534	2	STEM Ed
2014	Summer	ODU	3	TLCI 895 (Grant Writing)	1	Teaching and Learning (blended)
2014	Fall	ODU	3	STEM 720/820	1	STEM Ed
2015	Spring	ODU	3	STEM 434/534	1	STEM Ed
2015	Fall	ECU	3	SCIE 3602/6004	1	STEM Ed

### Advising of Theses and Dissertations:

William McConnell (Spring 2015 – Summer 2015) *The impact of design-based modeling instruction on seventh graders' spatial abilities and model-based argumentation*. PhD from Department of Teaching and Learning. Dissertation Committee. \*Chair of Committee \*\* Won Outstanding PhD Student Award

Rodney Ragsdale (Spring 2012 – Fall 2014). *High school engineering/technology education course impacts on Georgia Standardized Achievement scores*. PhD from Department of STEM Education and Professional Studies. Dissertation Committee.

William McConnell (Summer 2014 – Fall 2014) *The impact of 3D printing technologies on student participation in a middle school life science lesson*. PhD from Department of Teaching and Learning. Comp Committee. \*Chair of Committee

Stephanie Hathcock (Summer 2013 – Summer 2014) *Professional identity and pedagogical discontentment in high school science teachers participating in a professional development institute*. PhD from Department of Educational Curriculum and Instruction. Dissertation Committee. \*Chair of Committee \*\* Won Outstanding PhD Student Award

Suzanne Unger (Summer 2011 – Spring 2014) *Perspectives of international students performing service-learning in the United States: A case study with Amizade*. PhD from Department of Teaching and Learning. Dissertation Committee.

Suzanne Unger (Summer 2011 – Spring 2013) *Students' perspectives of their service-learning experiences: A case study of Operation Smile*. PhD from Department of Teaching and Learning. Comp Committee.

Amanda Roberts (Summer 2012 – Fall 2013) *Preferred instructional design strategies for preparation of pre-service teachers of integrated STEM education*. PhD from the Department of Occupational and Technical Studies. Dissertation Committee.

Stephanie Hathcock (Summer 2012 – Summer 2013) *Scaffolding for creative product*

*possibilities in a design-based STEM activity.* PhD from Department of Educational Curriculum and Instruction. Comp Committee. \*Chair of Committee

Rose Riggs (Fall 2009 – Summer 2012) *Can practice calibrating by test topic improve public school students' calibration accuracy and performance on tests?* PhD from Department of Teaching and Learning. Dissertation Committee.

Debra Duffy (Fall 2011 – Summer 2012). *The nature and role of physical models in enhancing sixth grade students' mental models of groundwater and groundwater processes.* PhD from Department of Teaching and Learning. Dissertation Committee. \*Chair of Committee

Rose Hotchkiss (Spring 2011 – Fall 2011) *Elementary teachers' views of environmental education.* PhD from Department of Teaching and Learning. Dissertation Committee. \*Chair of Committee

Diego Narvaez (Fall 2009 – Fall 2011) *Modeling the dispersion of eastern oyster larvae (crassostrea virginica) and its effects on the movement of disease resistant genes in the Delaware Bay Estuary.* PhD from Department of Ocean, Earth, and Atmospheric Sciences. Dissertation Committee.

Kristin Palmer (Spring 2009 – Fall 2011) *How "struggling" readers engage in literacy events in middle school science: An analysis of interactions in literacy events.* PhD from Department of Educational Curriculum and Instruction. Dissertation Committee.

Debra Duffy (Summer 2011) *Groundwater in state science standards documents.* PhD from Department of Teaching and Learning. Comp Committee. \*Chair of Committee

Rose Hotchkiss (Fall 2009 – Fall 2010) *Development and validation of an instrument to assess elementary teachers' views of environmental education.* PhD from Department of Educational Curriculum and Instruction. Comp Committee. \*Chair of Committee

Patti Horne (Fall 2009 – Spring 2010) *Urban elementary students' views of environmental scientists, environmental caretakers, and environmentally responsible behaviors.* PhD from Department of Educational Curriculum and Instruction. Dissertation Committee. \*Chair of Committee

Patti Horne (Spring 2009 – Fall 2009) *High school students' argument development in response to media stories on science issues.* PhD from Department of Educational Curriculum and Instruction. Comp Committee. \*Chair of Committee

Frank Stonier (Fall 2008 – Fall 2009) *An examination of views of science held by English-trained Chinese students.* PhD from Department of Educational Curriculum and Instruction. Comp Committee.

Rose Riggs (2008-2009) *The calibration accuracy of middle school students in math*

classes. PhD from Department of Educational Curriculum and Instruction. Comp Committee.

Roger Skophammer (Fall 2008 - Spring 2009) *Technological literacy in K-12 teacher preparation: A review of course requirements at accredited education institutions*. PhD from Department of Occupational and Technical Studies. Dissertation Committee.

Tim Goodale (2008-2009) *Multivariate analysis of the impact of gender and college major on student levels of environmental concern and knowledge*. PhD from Department of Educational Curriculum and Instruction. Comp Committee.

Erik Chapman (2006 – Fall 2008) *A study of physical and biological factors influencing chick growth and adult foraging energetics among Adelie penguins (Pygoscelis adeliae) on the West Antarctic Peninsula*. PhD from Department of Ocean, Earth, and Atmospheric Sciences. Dissertation Committee.

Iris Nelson (2004) *The relationship between undergraduate research and implementation of inquiry-based instructional strategies*. Masters at CofC

Sarah McGuire (2004-2005) *Marine biology curriculum development*. Masters at CofC

### **Published Books, Monographs, Book Reviews, and Papers (64):**

#### **Book Chapters (4):**

4. Dickerson, D.L., Cantu, D., Hathcock, S., McConnell, W., & Levin, D. (In Press). Instrumental STEM: Development of a STEM Instructional Model. In L. Annetta & J. Minogue (Eds.), *Achieving Science and Technological Literacy Through Engineering Design Practices*. Netherlands: Springer.
3. Hathcock, S. J., & Dickerson, D. (2015). Hitting the big screen: Urban youth activism through documentary film. In *Ecojustice, Citizen Science and Youth Activism: Situated tensions for science education* (385-396). Mueller, M. P., & Tippins, D. J. (Eds.). Switzerland: Springer.
2. Dickerson, D.L., Stewart, C.O., Hathcock, S., & McConnell, W. (2014). The nature and role of science kits in affecting change in public understanding of science. In L. Hin & R. Subramaniam (Eds.), (pp. 47-62). *Communicating Science to the Public: Opportunities and Challenges for the Asia-Pacific Region*. Netherlands: Springer.
1. Dickerson, D.L., Hinton-Johnson, K., & Dawkins, K.R. (2009). Bridging the culture of science and the cultures of our students. In G.S. Taylor, K. Hinton-Johnson, & L. Moore (Eds.), (pp. 49-62). *Teaching multicultural literature to help children understand ethnic diversity*. Lewiston, NY: Edwin Mellen Press.

#### **Book Contributions (1):**



1. Dickerson, D.L. (2010). Teacher diary: Think sheets. Contribution to Morrison, G. R. & Lowther, D. L. *Integrating Computer Technology into the Classroom: Skills for the 21st Century*, 4<sup>th</sup> Ed. Boston: Allyn & Bacon.

**Journal Articles (35), Book Reviews (2) \*, and Editorials (3) \*:**

40. Levin, D. & Dickerson, D. (Accepted). Making STEM REAL – Real, experiential active learning an authentic interdisciplinary connection between the “schoolshed” and the watershed. *Marine Technology Society Journal*. (2015 Impact Factor: 0.678)
39. Katsioloudis, P., Dickerson, D., Jovanovic, V., & Jones, M. (2015). Evaluation of static vs. dynamic visualizations for engineering technology students and implications on sectional view sketching: A quasi-experimental study. *Engineering Design Graphics Journal*, 79(1), XXXXX.
38. Hathcock, S. J., Dickerson, D., Eckhoff, A., & Katsioloudis, P. (In Press). Scaffolding for creative product possibilities in a design-based STEM activity. *Research in Science Education*. (2013 Impact Factor: 1.268)
37. Unger, S.B., Pribesh, S., Bol, L., and Dickerson, D. (In Press). Students’ perspectives of NGO service-learning experiences: A case study of Operation Smile. *Journal of Nonprofit Education and Leadership*.
36. Dickerson, D.L. (2015). *Vexation and Venture: Standardized Testing*. *Journal of Virginia Science Education*, 10(1), 56-60. (Invited Article)\*
35. Hagevik, R., Beilfuss, M., & Dickerson, D. (2014). Using multiple representations in teaching various disciplines of science. *Michigan Science Teachers Association (MSTA) Journal*, 59(1), 16-22.
34. Dickerson, D.L., Eckhoff, A., Stewart, C.O., Chappell, S., & Hathcock, S. (2014). The examination of a pullout STEM program for urban upper elementary students. *Research in Science Education*, 44(3), 483-506. (2013 Impact Factor: 1.268)
33. McConnell, W. & Dickerson, D.L. (2014). A real-world integrated STEM lesson provides opportunity for cross-subject teacher collaboration. *Technology and Engineering Teacher*, 73(8), 24-29. (Invited Article)\*
32. McConnell, W. & Dickerson, D.L. (2013). Connections between the digital and physical world: Angry Birds. *Science & Children*, 51(4), 38-43.
31. St. John, K., Dickerson, D.L., & McNeal, K. (2013). *Guide to aspiring authors*. *Journal of Geoscience Education*, 61(3), 253-255. (Editorial)\*

30. Dickerson, D.L., Hathcock, S., Stonier, F., & Levin, D. (2012). *The great build-a-buoy challenge*. *Science and Children*, 50(4), 62-66.
29. Stonier, F., Dickerson, D.L., & Lucking, R. (2012). *An examination of views of science held by English-trained Chinese students*. *School Science and Mathematics*, 112(8), 453-516.
28. Verma, A., Dickerson, D.L., & McKinney, S. (2011). *Engaging students in STEM careers with project-based learning – MarineTech Project*. *Technology and Engineering Teacher*, 17(1), 25-31.
27. Cook, M., Annetta, L., Dickerson, D.L., & Minogue, J. (2011). *In-service teachers' perceptions of online learning environments*. *Quarterly Review of Distance Education*, 12(2), 73-80.
26. Gunter, A.T. & Dickerson, D.L. (2011). Activity: Dress like a penguin. *Current: The Journal of Marine Education*, 27(2), 35-38.
25. Bol, L., Riggs, R., Hacker, D., Dickerson, D.L., and Nunnery, J. (2011). *The calibration accuracy of middle school students in math classes*. *The Journal of Research in Education*, 21(2), 81-96.
24. Verma, A., Ferrari, R., Talaiver, M., McKinney, S., Dickerson, D.L., & Chen, D. (2010). MarineTech Project – Attracting students towards math and science careers in shipbuilding and repair industry. *Journal of Ship Production*, 26(1), 29-35.
23. Dickerson, D.L. (2010). Professional books: Review [Review of the book *Jump into science: Active learning for preschool children*]. *Childhood Education: Infancy through Early Adolescence*, 86(3), 182-183. (Book Review)\*
22. Dickerson, D.L. (2010). Professional books: Review [Review of the book *More everyday science mysteries: Stories for inquiry-based science teaching*]. *Childhood Education: Infancy through Early Adolescence*, 86(3), 182. (Book Review)\*
21. Stewart, C.O., Dickerson, D.L., & Hotchkiss, R. (2009). Beliefs about science and news frames in audience evaluations of embryonic and adult stem cell research. *Science Communication*, 30(4), 427-452. (Impact Factor: 1.436 | Ranking: 16/72 in Communication | 5-Year Impact Factor: 2.421 as of 9/6/13)
20. Stonier, F.W. & Dickerson, D.L. (2009). Reaching all students through writing. *Young Children*, 64(1), 32-36.

19. Dawkins, K.R., Dickerson, D.L., McKinney, S.E., & Butler, S. (2008). Teaching density to middle school students: Preservice science teachers' content knowledge and pedagogical practice. *The Clearing House*, 82(1), 21-26.
18. Searcy, C., Landaeta, R., Adcock, A., Marken, J., Dickerson, D.L., & Kotnour, T. (2008). Student perceptions of cooperative learning in a blended engineering course. *World Review of Science, Technology and Sustainable Development*, 5(3/4), 373-388.
17. Dickerson, D.L., Dawkins, K.R. & Penick, J.E. (2008). Clergy's views of the relationship between science and religious faith and the implications for science education. *Science & Education*, 17(4), 359-386. (2012 Impact Factor: 0.707)
16. McKinney, S.E., Berry, III. R.Q., Dickerson, D.L., & Campbell-Whately, G. (2008). Addressing urban teacher attrition by addressing urban teacher retention: Why effective urban teachers persevere. *Educational Research and Reviews*, 3(1), 1-9.
15. Hotchkiss, R. & Dickerson, D.L. (2008). Fifth grade remote sensing earth science mission. *Science and Children*, 46(1), 41-49.
14. Wallace, A, Dickerson, D.L., & Hopkins, S. (2007). Moon phase as a context for teaching scale factor. *Science Scope*, 31(4), 16-22.
13. Dickerson, D.L., Dawkins, K.R., Berry, III, R.Q., & Pribesh, S. (2007). Secondary earth/environmental science teachers' aversion to videotaped self-study. *Journal of Geoscience Education*, 55(5), 377-380.
12. Dickerson, D.L., Dawkins, K.R., & Annetta, L. (2007). Scientific fieldwork: An opportunity for pedagogical-content knowledge development. *Journal of Geoscience Education*, 55(5), 371-376.
11. Dickerson, D.L., Penick, J.E., Dawkins, K.R., & Van Sickle, M. (2007). Groundwater in science education. *Journal of Science Teacher Education*, 18(1), 45-61.
10. Dawkins, K.R. and Dickerson, D.L. (2007). Building a community of teacher learners in an earth/environmental science professional development opportunity. *Journal of Geoscience Education*, 55(1), 67-71.
9. Annetta, L. & Dickerson, D.L. (2006). Integrating point-to-point videoconferencing into professional development of rural elementary school science teachers. *Contemporary Issues in Technology and Teacher Education* [Online serial], 6(4). Available: <http://www.citejournal.org/vol6/iss4/science/article1.cfm>.
8. Dickerson, D.L. & Callahan, T. (2006). Ground water is not a priority. *Ground Water*, 44(3), 323. (Editorial)\* (Impact Factor: 2.132)

7. Dickerson, D.L., Clark, M., Dawkins, K., & Horne, C. (2006). Using science kits to construct content understandings in elementary schools. *Journal of Elementary Science Education*, 18(1), 43-56.
6. Dickerson, D.L., Callahan, T., Van Sickle, M., & Hay, G. (2005). Students' conceptions of scale regarding groundwater. *Journal of Geoscience Education*, 53(4), 374-380.
5. Rogers, E., Nelson, I., Dickerson, D.L., Van Sickle, M., Tempel, C., & Coffey, P. (2005). Project Inquiry: Developing Lowcountry in-service professionals in science. *Teacher Education Journal of South Carolina*, 4-8.
4. Wallace, A., Dickerson, D.L., Van Sickle, M., Tempel, C., Coffey, P., & Powell, S. (2004). Project Inquiry: An NSF-funded professional development model for promoting scientific inquiry in middle level classrooms. *Current Issues in Middle Level Education*, 10(2), 14-23.
3. Dickerson, D.L. & Dawkins, K.R. (2004). Eighth grade students' understandings of groundwater. *Journal of Geoscience Education*, 52(1), 178-181.
2. Dickerson, D.L. & Dawkins, K.R. (2004). Use of scientific fieldwork in designing high quality professional development programs. *Teacher Education Journal of South Carolina*, 52-56.
1. Dickerson, D.L. (2002). When, where, and how? A critical look at technology use in middle grades earth science. *Meridian: A Middle School Computer Technologies Journal*, 5(2). <http://www.ncsu.edu/meridian/>

### **Technical Reports (18):**

18. Dickerson, D.L. (July, 2015). *Interim report for NOAA B-WET Grant Program – Project-Ready Citizen Science*. Norfolk, VA: Old Dominion University.
17. Dickerson, D.L. (January, 2015). *Interim report for NOAA B-WET Grant Program – Project-Ready Citizen Science*. Norfolk, VA: Old Dominion University.
16. Dickerson, D.L. (February, 2014). 2013 CMG – Old Dominion University (ODU) National Science Teachers Association (NSTA) Final Report. Virginia Department of Environmental Quality.
15. Dickerson, D.L., Dickinson, G., & Butler, L. (September, 2013). *NCATE SPA Report*. Norfolk, VA: Old Dominion University.
14. Dickerson, D.L. (July, 2013). 2013 CMG – Old Dominion University (ODU) National Science Teachers Association (NSTA) Interim Report. Virginia Department of Environmental Quality.

13. Fantz, T., Dickerson, D.L., & Katsioloudis, P. (July, 2013). Fabrication using 3D printers in space. Virginia Space Grant Consortium.
12. Verma, A., Talaiver, M., McKinney, S., Dickerson, D.L., Dwivedi, S., & Chen, D. (November, 2012). MarineTech Project – Final Report. National Science Foundation.
11. Dickerson, D.L., Hofmann, E., & Hathcock, S. (September, 2012). *Final report for NOAA B-WET Grant Program – Project SEARCH*. Norfolk, VA: Old Dominion University.
10. Dickerson, D.L., Hofmann, E., & Hathcock, S. (January, 2012). *Interim report for NOAA B-WET Grant Program – Project SEARCH*. Norfolk, VA: Old Dominion University.
9. Dickerson, D.L., Judge, S., & Butler, L. (September, 2011). *NCATE SPA Report*. Norfolk, VA: Old Dominion University.
8. Dickerson, D.L., Hofmann, E., & Hathcock, S. (July, 2011). *Interim report for NOAA B-WET Grant Program – Project SEARCH*. Norfolk, VA: Old Dominion University.
7. Dickerson, D.L., Hofmann, E., & Hathcock, S. (January, 2011). *Interim report for NOAA B-WET Grant Program – Project SEARCH*. Norfolk, VA: Old Dominion University.
6. Verma, A., Talaiver, M., McKinney, S., Dickerson, D.L., Dwivedi, S., & Chen, D. (October, 2010). MarineTech Project – Annual Report. National Science Foundation.
5. Dickerson, D.L., Hofmann, E., & Horne, P. (June, 2010). *Interim report for NOAA B-WET Grant Program – Project SEARCH*. Norfolk, VA: Old Dominion University.
4. Dickerson, D.L. & Clayton, T. (January, 2010). *Final report for SEEDS Mission Grant Program - Gates GLEANS*. Hobbsville, NC: Zion United Methodist Church.
3. Dickerson, D.L., Hofmann, E., & Horne, P. (January, 2010). *Interim report for NOAA B-WET Grant Program – Project SEARCH*. Norfolk, VA: Old Dominion University.
2. Verma, A., Talaiver, M., McKinney, S., Dickerson, D.L., Dwivedi, S., & Chen, D. (October, 2009). MarineTech Project – Annual Report. National Science Foundation.
1. Verma, A., Talaiver, M., McKinney, S., & Dickerson, D.L. (July, 2009). SCHEV – MarineTech Project – Annual Report. State Council for Higher Education.

**Published Abstracts (7):**

7. Verma, A., Talaiver, M., McKinney, S., Dickerson, D.L., & Chen, D. (2009). MarineTech – Project – Attracting students towards math and science careers in

shipbuilding and repair industry. Proceedings of the SNAME Annual Conference, Providence, RI, October 20-24.

6. Dickerson, D.L., Steckroth, J., & Butler, L. (2009). *Professional development in science education via podcasting*. Proceedings of the Association for Science Teacher Education (ASTE) 2009 International Conference. <http://theaste.org/cgi-bin/2009conference/2009proceedings.pl>
5. Dickerson, D.L. & Duffy, D. (2008). The tablet pc in geoscience education. *Geological Society of America Abstracts*, 40(4), 7. [http://gsa.confex.com/gsa/2008SE/finalprogram/abstract\\_136411.htm](http://gsa.confex.com/gsa/2008SE/finalprogram/abstract_136411.htm)
4. Dickerson, D.L., Stewart, C.O., & Cutshaw, D.V. (2008). Rhetorical analysis of socioscientific issues in popular news media. Proceedings of the Association for Science Teacher Education (ASTE) 2008 International Conference. [http://theaste.org/publications/proceedings/2008proceedings/2008\\_ASTE\\_Proceedings.pdf](http://theaste.org/publications/proceedings/2008proceedings/2008_ASTE_Proceedings.pdf)
3. Beilfuss, M., Dickerson, D.L., Boone, W., & Libarkin, J. (2004). *Exploring Conceptual Understandings of Groundwater Through Student's Interviews and Drawings*. Proceedings of the 77<sup>th</sup> Annual Meeting of the National Association for Research in Science Teaching, Vancouver, B.C.
2. Dickerson, D.L. & Callahan, T. (2004). Hydrogeology students' conceptions of scale regarding groundwater. *Geological Society of America Abstracts*, 36(5). [http://gsa.confex.com/gsa/2004AM/finalprogram/abstract\\_77251.htm](http://gsa.confex.com/gsa/2004AM/finalprogram/abstract_77251.htm)
1. Dawkins, K.R. & Dickerson, D.L. (2003). *Students' conceptions of scientific theories*. Proceedings of the 76<sup>th</sup> Annual Meeting of the National Association for Research in Science Teaching, Philadelphia, PA.

**Presentations at Professional Meetings (135 presented & 1 accepted):**

136. Dickerson, D.L., McConnell, W., Lewandowski, D., & Borick, D. (November, 2015). *Autonomous underwater vehicles for learning*. To be presented at the annual meeting of the Virginia Association of Science Teachers in Chantilly, VA.
135. McConnell, W., Dickerson, D., & Katsioloudis, P. (April, 2015). *3D printing technology as an educational tool for seventh grade students: Do affordances outweigh constraints?* Presented at the annual meeting of the National Association of Research in Science Teaching (NARST) in Chicago, IL.
134. Hathcock, S., Garner, J., Dickerson, D., Kaplan, A., & Katsioloudis, P. (April, 2015). *Professional Identity Interactions and Triggers for Change: A Multiple Case Study of Teachers' Responses to Professional Development*. Presented at the annual meeting of the National Association for Research in Science Teaching, Chicago, IL.

133. Unger, S., Pribesh, S., Bol, L., & Dickerson, D. (2015, April). *Perspectives of international students Performing service learning in the United States*. Poster session presented at the meeting of the American Educational Research Association, Chicago, IL.
132. Stewart, C. O., McConnell, J. R., & Dickerson, D. L. (2015, April). *Deference to scientific authority and support for science across domains: Influences of science education and religiosity*. Presented at the annual meeting of the American Educational Research Association (Science Teaching & Learning SIG), Chicago, IL.
131. Hathcock, S. J., Garner, J. K., Dickerson, D., Kaplan, A., & Katsioloudis, P. (January, 2015). *Professional identity of high school science teachers participating in a reform-based PD*. Presented at the annual meeting of the Association for Science Teacher Education. Portland, OR.
130. McConnell, W. & Dickerson, D.L. (January, 2015). 3D printing and evolution: Presenting the future. Presented at the annual meeting of the Association of Science Teacher Educators. Portland, OR.
129. Dickerson, D.L. & McConnell, W. (January, 2015). A collaborative student-authored book as a doorway to environmental stewardship. Presented at the annual meeting of the Association of Science Teacher Educators. Portland, OR.
128. McConnell, W. & Dickerson, D.L. (November, 2014). Angry birds and 3D printing. Presented at the annual meeting of the Virginia Association of Science Teachers. Roanoke, VA.
127. Dickerson, D.L., McConnell, W., & Nelson, L. (November, 2014). The environmental training ground. Presented at the annual meeting of the Virginia Association of Science Teachers. Roanoke, VA.
126. McConnell, W. & Dickerson, D.L. (September, 2014). The impact of 3D printing technologies on engineering design: A comparative case study. Presented at the annual meeting of the Mid-Atlantic Association of Science Teacher Educators. Blowing Rock, NC.
125. Mann, M., Jovanovic, V., Katsioloudis, P., & Dickerson, D.L. (June, 2014) Fast fashion and sustainable manufacturing systems. Presented at the annual meeting of the American Society for Engineering Education. Indianapolis, IN.
124. Dickerson, D.L., Stewart, C.O., Eckhoff, A., Hathcock, S., & McConnell, B. (April, 2014). The examination of a pullout STEM program for urban upper elementary students. Presented at the annual meeting of the National Association for Research in Science Teaching. Pittsburg, PA.

123. McConnell, B. & Dickerson, D.L. (January, 2014). Connections between the digital and physical world: Angry Birds. Presented at the annual meeting of the Association of Science Teacher Educators. San Antonio, TX.
122. Dickerson, D.L., Stewart, C.O., Eckhoff, A., Hathcock, S., & McConnell, B. (January, 2014). The examination of a pullout STEM program for urban upper elementary students. Presented at the annual meeting of the Association of Science Teacher Educators. San Antonio, TX.
121. Dickerson, D.L., McConnell, W., Hathcock, S., & Nelson, L. (November, 2013). Environmental advocacy through self-produced literature. Presented at the annual meeting of the Virginia Association of Science Teachers. Hampton, VA.
120. Hathcock, S., Dickerson, D.L., & McConnell, W. (November, 2013). Using inquiry questioning to scaffold creativity in a STEM activity. Presented at the annual meeting of the Virginia Association of Science Teachers. Hampton, VA.
119. Dickerson, D.L., McConnell, W., Hathcock, S., & Nelson, L. (November, 2013). Integrated STEM activity to teach design process. Presented at the annual meeting of the Virginia Association of Science Teachers. Hampton, VA.
118. Dickerson, D.L., Hathcock, S., McConnell, W., & Burgin, S. (November, 2013). Teaching about STEM careers. Presented at the annual meeting of the Virginia Association of Science Teachers. Hampton, VA.
117. St. John, K., Dickerson, D.L., & McNeal, K. (October, 2013). Guide to aspiring authors: Getting started in geoscience education scholarship and JGE publication. Presented at the annual meeting of the Geological Society of America. Denver, CO.
116. Dickerson, D.L. (May, 2013). STARBASE: An effective system-wide STEM program. Presented at the annual meeting of the National Science Teachers Association STEM Forum and Expo. St. Louis, Missouri.
115. Hathcock, S., & Dickerson, D.L. (April, 2013). Student navigation of design-based STEM activities. Presented at the annual meeting of the National Association for Research in Science Teaching. Rio Grande, Puerto Rico.
114. Hathcock, S., & Dickerson, D.L. (April, 2013). Lights, camera, action: Promoting environmental stewardship through documentary film creation. Presented at the annual meeting of the National Association for Research in Science Teaching. Rio Grande, Puerto Rico.



113. Hathcock, S. & Dickerson, D.L. (January, 2013). Real-World STEM: Explorations in field-based oceanography. Presented at the annual meeting of the Association of Science Teacher Educators. Charleston, SC.
112. Dickerson, D.L. & Hathcock, S. (January, 2013). Using documentary film making as a teaching and learning tool for environmental education. Presented at the annual meeting of the Association of Science Teacher Educators. Charleston, SC.
111. Dickerson, D.L., Nelson, L., Garcell, J., & Pollard, S. (November, 2012). *Student-made documentary films may save the world*. Presented at the annual meeting of the Virginia Association of Science Teachers. Williamsburg, VA.
110. Dickerson, D.L., Hathcock, S., & Nelson, L. (November, 2012). *Project SEARCH real-time data*. Presented at the annual meeting of the Virginia Association of Science Teachers. Williamsburg, VA.
109. Hathcock, S. & Dickerson, D.L. (November, 2012). *STEM in action: Fieldwork experiences in Antarctica*. Presented at the annual meeting of the Virginia Association of Science Teachers. Williamsburg, VA.
108. Stewart, C., Dickerson, D.L., Hathcock, S., Weston, J., & Minogue, J. (April, 2012). *Predicting undergraduate students' beliefs about science: An exploratory study using the Thinking about Science Survey Instrument (TSSI)*. Presented at the annual meeting of the American Educational Research Association. Vancouver, British Columbia.
107. Dickerson, D.L., Hathcock, S., Hofmann, E., Stewart, C., McKinney, S., Katsioloudis, P., & Nelson, L. (April, 2012). *Urban fifth grade students' ideas about the local environment, environmental stewardship, and science-related careers*. Presented at the annual meeting of the American Educational Research Association. Vancouver, British Columbia.
106. Hathcock, S. & Dickerson, D.L. (March, 2012). Urban students' perceptions of scientists, stewards, & the environment. Presented at the annual meeting of the National Association for Research in Science Teaching. Indianapolis, Indiana.
105. Dickerson, D.L. & Hathcock, S. (March, 2012). *Urban elementary students' ideas about the environment, activism, and jobs*. Presented at the annual meeting of the National Association for Research in Science Teaching. Indianapolis, Indiana.
104. Hathcock, S., Dickerson, D.L., Neefe, R., & Nelson, L. (November, 2011). *Impacts of peer teaching in environmental education*. Presented at the annual meeting of the Virginia Association of Science Teachers. Roanoke, VA.

103. Dickerson, D.L., Hathcock, S., Neefe, R., & Nelson, L. (November, 2011). *Build-a-buoy challenge*. Presented at the annual meeting of the Virginia Association of Science Teachers. Roanoke, VA.
102. Hathcock, S. & Dickerson, D.L. (October, 2011). *Urban youth activism through documentary film*. Presented at the annual meeting of the Southeast Regional Association of Science Teacher Educators. Athens, GA.
101. Dickerson, D.L. & Hathcock, S. (October, 2011). *Project SEARCH – Buoys, non-traditional STEM fields, and policy-ready citizen science*. Presented at the annual meeting of the North American Association of Environmental Educators. Raleigh, NC.
100. Dickerson, D.L. & Hathcock, S. (October, 2011). Build-a-buoy activity for teachers. Presented at the annual meeting of the Mid-Atlantic Marine Education Association. Williamsburg, VA.
99. McKinney, S., Robinson, J., Ready, A., & Dickerson, D.L. (April, 2011). A comparison of the factors that influence urban teachers to remain. Presented at the annual meeting of the American Education Research Association. New Orleans, LA.
98. Dickerson, D.L., Horne, P., Hathcock, S., Hofmann, E., & Nelson, L. (April, 2011). Combining environmental education and integrated STEM instruction: A model and case study. Presented at the annual meeting of the National Association for Research in Science Teaching, Orlando, FL.
97. Horne, P., Dickerson, D.L., Bol, L., & Butler, L. (January, 2011). Urban elementary students' views of environmental scientists, environmental caretakers, and environmentally responsible behaviors. Presented at the annual meeting of the Association of Science Teacher Educators, Minneapolis, MN.
96. Dickerson, D.L., Hofmann, E., Horne, P., Hathcock, S., & Nelson, L. (January, 2011). Project SEARCH - Bringing STEM and environmental education together. Presented at the annual meeting of the Association of Science Teacher Educators, Minneapolis, MN.
95. Dickerson, D.L. & Hathcock, S. (December, 2010). The application of BOBs in Project SEARCH. Presented at the BOB III Conference, Jacksonville, FL. (Invited Speaker)\*.
94. Sandie, D., Deans, S., Gunter, A., Neefe, R., Dickerson, D.L., Horne, P., and Hathcock, S. (November, 2010). Project SEARCH – Probeware and water quality in the Bay. Presented at the annual meeting of the Virginia Association of Science Teachers, Hampton, VA.

93. Gunter, A., Sandie, D., Deans, S., Neefe, R., Dickerson, D.L., Horne, P., and Hathcock, S. (November, 2010). Project SEARCH – Probeware and weather in the classroom. Presented at the annual meeting of the Virginia Association of Science Teachers, Hampton, VA.
92. Deans, S., Gunter, A., Sandie, D., Neefe, R., Dickerson, D.L., Horne, P., and Hathcock, S. (November, 2010). Project SEARCH – Digital microscopy in the classroom. Presented at the annual meeting of the Virginia Association of Science Teachers, Hampton, VA.
91. Horne, P., Dickerson, D.L., Bol, L., and Butler, L. (November, 2010). Project SEARCH - Urban elementary students’ views of environmental roles and actions. Presented at the annual meeting of the Virginia Association of Science Teachers, Hampton, VA.
90. Dickerson, D.L., Horne, P., Hathcock, S., Sandie, D., Deans, S., Gunter, A. and Neefe, R. (November, 2010). Project SEARCH - True STEM Integration through Buoys. Presented at the annual meeting of the Virginia Association of Science Teachers, Hampton, VA.
89. Dickerson, D.L., Horne, P., Hathcock, S. Gunter, A., Sandie, D., Deans, S., Neefe, R., Babcock, A., Eastlake, M., Lass, S., Thomson, C., and Unger, S. (November, 2010). Project SEARCH - Literacy and STEM Integration. Presented at the annual meeting of the Virginia Association of Science Teachers, Hampton, VA.
88. McDonnough, J., Sterling, D., Slykhuis, D., Easterling, T., Bell, R., Meadows, G., Berube, C., McCall, V., Dickerson, D.L., McKenzie, W., Granger, J., Vinion-Dubiel, A., & Frazier, W. (November, 2010). Learning within a community. Presented at the annual meeting of the Virginia Association of Science Teachers, Hampton, VA.
87. Katsioloudis, P. & Dickerson, D.L. (May, 2010). Integrative STEM education: History, implementation, research. Invited presentation by the Ministry of Education, Nicosia, Cyprus.\*
86. Stewart, C.O., Dickerson, D.L., & Hotchkiss, R. (May, 2010). Rhetorical effects of news frames on audience perceptions of adult and embryonic stem cell research. Presented at the annual meeting of the Rhetoric Society of America, Minneapolis, MN.
85. Riggs, R., Bol, L., Nunnery, J., & Dickerson, D.L. (May, 2010). The calibration accuracy of middle school students in math classes. Presented at the annual meeting of the American Educational Research Association, Denver, CO.
84. McKinney, S., Robinson, J., & Dickerson, D.L. (May, 2010). A comparison of the mathematics instructional practices of elementary teachers in urban high-poverty

- schools. Presented at the annual meeting of the American Educational Research Association, Denver, CO.
83. Horne, P., Dickerson, D.L., & Bol, L. (May, 2010). High school students' argument development in response to media. Presented at the annual meeting of the American Educational Research Association, Denver, CO.
82. Dickerson, D.L., McKinney, S., Verma, A., Horne, P., & Hotchkiss, R. (May, 2010). Understandings of density and buoyancy. Presented at the annual meeting of the American Educational Research Association, Denver, CO.
81. Verma, A., McKinney, S., & Dickerson, D.L. (March, 2010). Marine Tech: Connecting Students to Careers in Mathematics, Science, and the Shipbuilding and Career Industry. Presented at the International Consortium for Research in Science and Mathematics Education, La Manzanilla, Mexico.
80. Dickerson, D.L. (February, 2010). Science Education Advancing Research of the Chesapeake Bay and its Habitats (SEARCH): A Description of a NOAA B-WET Project. Presented as part of the Commonwealth Center for Coastal Physical Oceanography 2010 Spring Seminar Series, Norfolk, VA.
79. Verma, A., Talaiver, M., McKinney, S., Dickerson, D.L., Dwivedi, S., & Chen, D. (2010, January). Project based learning for STEM education with focus on marine industry - MarineTech Project. *Proceedings of the HICE Conference*, Honolulu, Hawaii.
78. Sterling, D., Berube, C., Dickerson, D.L., Sypolt, S., Bell, R., McKenzie, W., McDonnough, J., Peters, E., Slykhuis, D., Meadows, G., Flannagan, J., Schimmoeller, P., Sheldon, P., Easterling, T., & Frazier, W. (2009, November). Fostering a community of university-based teacher educators. Presented at the annual meeting of the Virginia Association of Science Teachers (VAST), Washington, DC.
77. Dickerson, D.L., Horne, P., Hotchkiss, R., McKinney, S., & Verma, A. (2009, November). MarineTech - Density, buoyancy, and boats. Presented at the annual meeting of the Virginia Association of Science Teachers (VAST), Washington, DC.
76. Verma, A., Talaiver, M., McKinney, S., Dickerson, D.L., & Chen, D. (2009, October). SCHEV MarineTech Project – Innovative uses of sea perch robot for STEM education. Presented at the SNAME Annual Conference, Providence, RI.
75. Dickerson, D.L., Hofmann, E., McKinney, S., Klink, J., Nelson, L., & Horne, P. (2009, July). SEARCH - Science education advancing research of the Chesapeake Bay and its habitats. Presented at the National NOAA B-WET Conference, Silver Spring, MD.

74. Cook, M., Annetta, L.A., Dickerson, D.L., & Minogue, J. (2009, April). Students' perceptions of online learning environments. Presented at the annual meeting of the National Association for Research in Science Teaching (NARST), Garden Grove, CA.
73. Dickerson, D.L., ndunda, m., Van Sickle, M., Duffy, D., Horne, P., Hotchkiss, R., & Stonier, F. (2009, April). *The role of culture in students' mental models of groundwater*. Presented at the annual meeting of the American Educational Research Association, San Diego, CA.
72. Stonier, F. & Dickerson, D.L. (2009, April). *Chinese socio-cultural resistance to and acceptance of model science positions*. Presented at the annual meeting of the American Educational Research Association, San Diego, CA.
71. Verma, A., Talaiver, M., McKinney, S., Dickerson, D.L., & Chen, D. (2009, February). MarineTech Project. Invited session at the National Science Foundation ITEST 2009 Summit. Washington, DC.\*
70. Taylor, G., Bristow, M., Moore, L., Dickerson, D.L., Allen, P., Baskwill, J., & Tait, M. (2009, February). *The persistence of multicultural texts in the age of educational accountability: Sharing stories of remembrance, resistance and renewal*. Presented at the annual meeting of the AACTE, Chicago, IL.
69. Dickerson, D.L., Steckroth, J. & Butler, L. (2009, January). *Professional development in science education via podcasting*. Presented at the annual meeting of the Association for Science Teacher Education, Hartford, CT.
68. Frazier, W., Sterling, D., McDonnough, J., Vacarre, P., McKenzie, W., Matkins, J., Bell, R., & Dickerson, D.L. (2008, November). *The best from college/university-based science teacher educators*. Presented at the annual meeting of the Virginia Science Teachers Association, Hampton, VA.
67. Cook, M., Annetta, L.A., Dickerson, D.L., & Minogue, J. (2008, October). *In-service teachers' perceptions of online learning experiences*. Presented at the annual meeting of the Association for Science Teacher Education Southeastern (SASTE) Region, Columbia, SC.
66. Dickerson, D.L. (2008, July). *Technology and literacy in elementary science education*. From Vision to Practice: Growing SySTEMic Literacy Across Content Areas, Richmond, VA. (Invited Speaker)\*
65. Stewart, C.O., Dickerson, D.L., & Hotchkiss, R. (2008, July). *Beliefs about science and news frames in audience evaluations of embryonic and adult stem cell research*. Presented at the annual meeting of Society for Text and Discourse, Memphis, TN.

64. Duffy, D. & Dickerson, D.L. (2008, April). *The tablet pc in geoscience education*. Presented at the annual meeting of the Geological Society of America - Southeastern, Charlotte, NC.
63. Stewart, C.O., Dickerson, D.L., & Hotchkiss, R. (2008, April). *The role of news frames and beliefs about science in evaluating stem cell research in popular news media*. Presented at the Old Dominion University Research Expo, Norfolk, VA.
62. Dickerson, D.L., Stewart, C.O., Hotchkiss, R. & Cutshaw, D.V. (2008, March). *Rhetorical analysis of global warming and other socioscientific issues in popular news media*. Presented at the annual meeting of the National Association of Research in Science Teaching, Baltimore, MD.
61. Dickerson, D.L. (2008, March). *Uses of scientific, historical, and faith-based evidence in addressing controversial science content*. Presented at the annual meeting of the American Educational Research Association, New York, NY.
60. Dickerson, D.L., Stewart, C.O., & Cutshaw, D.V. (2008, January). *Rhetorical analysis of socioscientific issues in popular news media*. Presented at the annual meeting of the Association for Science Teacher Education, St. Louis, MO.
59. Hotchkiss, R. & Dickerson, D.L. (2007, November). *Remote sensing earth science mission*. Presented at the annual meeting of the North Carolina Science Teachers Association, Greensboro, NC.
58. Dickerson, D.L. & Horne, P. (2007, November). *ProScopes in the science classroom: Exploring the possibilities*. Presented at the annual meeting of the North Carolina Science Teachers Association, Greensboro, NC.
57. Horne, P. & Dickerson, D.L. (2007, November). *ProScopes in K-5: Inspire, inquire, reflect, and connect*. Presented at the annual meeting of the Virginia Association of Science Teachers, Williamsburg, VA.
56. Hotchkiss, R. & Dickerson, D.L. (2007, November). *Studying local wetlands through remote sensing*. Presented at the annual meeting of the Virginia Association of Science Teachers, Williamsburg, VA.
55. Dickerson, D.L., Stonier, F., Hotchkiss, R., & Horne, P. (2007, November). *Using the tablet pc in science class*. Presented at the annual meeting of the Virginia Association of Science Teachers, Williamsburg, VA.

54. Dickerson, D.L., Hotchkiss, R., & Horne, P. (2007, November). *Introducing the ProScope to secondary science students*. Presented at the annual meeting of the Virginia Association of Science Teachers, Williamsburg, VA.
53. Dickerson, D.L., Horne, P., & Hotchkiss, R. (2007, November). *Groundwater in karst, sand, and stone*. Presented at the annual meeting of the Virginia Association of Science Teachers, Williamsburg, VA.
52. Searcy, C., Landaeta, R., Adcock, A., Marken, J., and Dickerson, D.L. (2007, November). *Technology-enhanced distance education in engineering: A research proposal*. Presented at the 28th Annual American Society for Engineering Management National Conference, Chattanooga, TN. U.S.A.
51. Dickerson, D.L. & Overbaugh, R. (2007, May). *Teaching science through authentic scientific inquiry using mobile technologies*. Poster presented at the annual ODU Summer Institute Technology Fair, Norfolk, VA.
50. Dickerson, D.L., Slykhuis, D., & Dawkins, K.R. (2007, April). *Examining cultural understandings of the relationship between intelligent design and nature of science*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, New Orleans, LA.
49. Dickerson, D.L., Adcock, A., & Dawkins, K.R. (2007, April). *The role of groundwater in students' understandings of our environment*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, New Orleans, LA.
48. Dickerson, D.L. & Adcock, A. (2007, April). *Secondary students' understandings of groundwater*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
47. Dickerson, D.L., Slykhuis, D., & Dawkins, K.R. (2007, April). *Middle-level pre-service science teachers' understandings of the relationship between intelligent design and nature of science*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
46. Dawkins, K.R. & Dickerson, D.L. (2007, January). *Preparing elementary in-service teachers for a return to science: A focus on rich content*. Paper presented at the annual meeting of the Association of Science Teacher Educators, Clearwater, FL.
45. Dickerson, D.L. & Slykhuis, D. (2007, January). *The use of comparative readings regarding Intelligent Design and NOS*. Paper presented at the annual meeting of the Association of Science Teacher Educators, Clearwater, FL.

44. Dickerson, D.L. & Overbaugh, R. (2007, January). *The tablet computer and science methods courses: A case study*. Paper presented at the annual meeting of the Association of Science Teacher Educators, Clearwater, FL.
43. Dickerson, D.L., Overbaugh, R., Warham, E., Horne, P, Hotchkiss, R., & Chappell, S. (2007, January). *The tablet computer and science methods courses: Explorations and possibilities*. Paper presented at the annual meeting of the Association of Science Teacher Educators, Clearwater, FL.
42. Dickerson, D.L. (2006, November). *Using groundwater models in earth/environmental science*. Paper presented at the annual meeting of the Virginia Association of Science Teachers, Richmond, VA.
41. Dickerson, D.L. & Slykhuis, D. (2006, November). *NOS and intelligent design in the science classroom*. Paper presented at the annual meeting of the Virginia Association of Science Teachers, Richmond, VA.
40. Dickerson, D.L. (2006, November). *Exploring groundwater using physical models*. Paper presented at the annual meeting of the North Carolina Science Teachers Association, Greensboro, NC.
39. Dickerson, D.L. & Slykhuis, D. (2006, November). *Science and faith in the science classroom*. Paper presented at the annual meeting of the North Carolina Science Teachers Association, Greensboro, NC.
38. Slykhuis, D.A. & Dickerson, D.L. (2006, October). *Science and religious faith in middle-level teacher education*. Paper presented at the annual meeting of the Association of Science Teacher Educators Mid-Atlantic Regional Conference, Marion, VA.
37. Dickerson, D.L. & Slykhuis, D. (2006, May). *Building understandings of nature of science through an activity designed to allow self-reflection regarding relationships between science and faith*. Paper presented at the Best Practices Roundtable Session at the annual meeting of the NC/SC Professors of Middle Level Education, Charleston, SC.
36. Beilfuss, M., Hagevik, R., & Dickerson, D.L. (2006, April). *Literature review: Multiple representations in science education*. As part of the paper set, Use of Multiple Representations in Science Education to be presented at the annual meeting of the National Association of Research in Science Teaching, San Francisco, CA.
35. Dickerson, D.L., Thompson, T., Rose-Baele, J., Van Sickle, M., Tempel, C., Coffey, P. & Dawkins, K.D. (2006, January). *Teachers' perceptions of an intensive, large-scale professional development program*. Paper presented at



the annual meeting of the Association of Science Teacher Educators in Portland, OR.

34. Dickerson, D.L., Hay, G.H., Fitzharris, L., Dawkins, K.D., Van Sickle, M. & Hofler, C.D. (2006, January). *The use of narrative writing prompts in a fourth grade science lesson regarding electrical circuits*. Paper presented at the annual meeting of the Association of Science Teacher Educators in Portland, OR.
33. Dawkins, K.R. & Dickerson, D.L. (2005, November). *The Sea-View project: Exploring the Outer Banks*. Paper presented at the annual meeting of the North Carolina Science Teachers Association in Greensboro, NC.
32. Dickerson, D.L., Hay, G.H., Fitzharris, L., Dawkins, K.D., & Hofler, C.D. (2005, November). *Using inquiry-based science instruction to enhance student writing*. Paper presented at the annual meeting of the North Carolina Science Teachers Association in Greensboro, NC.
31. Dickerson, D.L. (2005, November). *Groundwater: Is It Part of Your Water Cycle?* Paper presented at the annual meeting of the Virginia Association of Science Teachers in Roanoke, VA.
30. Dickerson, D.L., ndunda, m., & Van Sickle, M. (2005, April). *Issues of content and culture regarding ground water*. Poster presented at the annual meeting of the National Association for Research in Science Teaching in Dallas, TX.
29. Brannan, N. & Dickerson, D.L. (2005, March). *The role of practitioner research in developing and refining environmental education/ environmental science WebQuests*. Paper presented the annual meeting of the National Science Teachers Association in Dallas, TX.
28. Wallace, A., Dickerson, D.L., Van Sickle, M., Tempel, C., Coffey, P., & Powell, S. (2005, January). *Project Inquiry: Improving Science Teachers' Practice*. Paper presented at the annual meeting of the Association for the Education of Teachers in Science in Colorado Springs, CO.
27. Dickerson, D.L. (2005, January). *Twelfth grade students' conceptions of scale regarding groundwater*. Paper presented at the annual meeting of the Association for the Education of Teachers in Science in Colorado Springs, CO.
26. Dickerson, D.L. (2004, November). *Groundwater: The missing component of the water cycle*. Paper presented at the annual meeting of the South Carolina Science Council in Charleston, SC.
25. Dickerson, D.L., Tempel, C., Wallace, A., Coffey, P., Mintz, E., Calhoun, J., Blackman, W., Boyd, G., Benton, D., & Thomas, S. (2004, November). *Project*

- inquiry: Enhancing science education in the Lowcountry*. Paper presented at the annual meeting of the South Carolina Science Council in Charleston, SC.
24. Dickerson, D.L. & Callahan, T. (2004, November). *Hydrogeology students' conceptions of scale regarding ground water*. Paper presented at the annual meeting of the Geological Society of America in Denver, CO.
  23. Beilfuss, M., Dickerson, D.L., Boone, W., and Libarkin, J. (2004, April). *Exploring conceptual understandings of groundwater through students' interviews and drawings*. Paper presented at the annual meeting of the National Association for Research in Science Teaching in Vancouver, B.C.
  22. Dickerson, D.L., Clark, M., Dawkins, K., and Horne, C. (2004, April). *Using science kits in the construction of scientific procedure and content understandings*. Paper and multimedia poster presented at the annual meeting of the National Association for Research in Science Teaching in Vancouver, B.C.
  21. Dickerson, D.L. & Dawkins, K.R. (2004, January). *The role of evidence in the relationship between science and faith among pre-service teachers and United Methodist ministers*. Paper presented at the annual meeting of the Association for the Education of Teachers of Science in Nashville, TN.
  20. Slykhuis, D., Reid-Griffin, A., Park, J., Carter, G., Butler, S., Wiebe, E., Parsons, E.C., Haefner, L., Flynn, L., and Dickerson, D.L. (2004, January). *3-D geomapping earth science modules*. Interactive paper presentation at the annual meeting of the Association for the Education of Teachers of Science in Nashville, TN.
  19. Dickerson, D.L. (2003, November). *Practitioner research: Questions, examples, and possibilities*. Paper presented at the annual meeting of the South Carolina Science Council in Charleston, SC.
  18. Dickerson, D.L. & Wiebe, E. (2003, March). *The relationship of spatial visualization to naïve conceptions concerning groundwater*. Paper presented at the National Association for Research in Science Teaching in Philadelphia, PA.
  17. Dickerson, D.L. and Dawkins, K.R. (2003). *Action research on the nature of science: Questions, examples, and possibilities*. Conducted sessions in March at the National Science Teachers Association in Philadelphia, PA as part of Teacher Researcher Day organized by Emily van Zee and Deborah Roberts and supported by a grant from the Spencer Foundation.
  16. Van Zee, E., Roberts, D., Alvarez, E., Benson, S., Dickerson, D.L., & Dawkins, K.R. (2003). *Practitioner research: Looking at data – Part I and II*. Sessions

supported by a grant from the Spencer Foundation conducted in March at the National Association for Research in Science Teaching in Philadelphia, PA.

15. Dawkins, K.R. & Dickerson, D.L. (2003). *Students' conceptions regarding scientific theories*. Paper presented in March at the National Association for Research in Science Teaching in Philadelphia, PA.
14. Dawkins, K.R. & Dickerson, D.L. (2003). *Pre-service teachers' pedagogical content knowledge regarding density*. Paper presented in April at the American Educational Research Association in Chicago, IL.
13. Dickerson, D.L. (2003). *Comparison of eighth graders' and pre-service teachers' conceptualizations of groundwater*. Paper presented in March at the North Carolina Association of Research in Education in Holly Springs, NC.
12. Dickerson, D.L. & Dawkins, K.R. (2003). *Science and faith: Ideas of the clergy and implications for science teacher education*. Paper presented in January at the Association for the Education of Teachers in Science Conference in St. Louis, MO.
11. Minogue, J., Flynn, L., & Dickerson, D.L. (2002). *Examining your own teaching for profit and fun*. Hands-on session conducted in November at the North Carolina Science Teachers Association, Greensboro, NC.
10. Dickerson, D.L. & Wiebe, E. (2002). *What do students know about groundwater?* Paper presented in November at the North Carolina Science Teachers Association, Greensboro, N.C.
9. Dickerson, D.L. & Dawkins, K.R., (2002). *Earth-View: Earth processes and human impacts*. Session conducted in October at the National Science Teachers Association Eastern Regional Convention, Louisville, KY.
8. Dickerson, D.L. & Dawkins, K.R. (2002). *Middle grade students' conceptions of groundwater*. Paper presented at the Association for the Education of Teachers in Science Mid-Atlantic Regional Conference in Natural Bridge, VA.
7. Dickerson, D.L. & Dawkins, K.R., (2002). *Scientific fieldwork: An opportunity for pedagogical-content knowledge development*. Paper presented at the International Conference of the Association of Teacher Education in Europe, Warsaw, Poland.
6. Dawkins, K.R. & Dickerson, D.L., (2002). *Teacher networking: An unintended outcome of professional development*. Paper presented at the International Conference of the Association of Teacher Education in Europe, Warsaw, Poland.

5. Dickerson, D.L. & Dawkins, K.R., (2002). *Examining science fieldwork in earth/environmental science professional development: A case study*. Paper presented at the National Association for Research in Science Teaching, New Orleans, LA.
4. Dickerson, D.L., (2002). *Teachers' content knowledge construction through hydrologic fieldwork*. Paper presented at the North Carolina Association for Research in Education, Chapel Hill, NC.
3. Dickerson, D.L., (2001). *How do in-service fieldwork-based workshops evoke conceptual and pedagogical changes?* Paper presented as part of symposium entitled, *Qualitative investigations of informal and formal education: Contexts for learning science*, at the North Carolina Association of Researchers in Education, Charlotte, NC.
2. Dickerson, D. L. & Dawkins, K. R., (2001). *Teachers' pedagogical content knowledge in earth/environmental science*. Paper presented at the North Carolina Association of Researchers in Education, Charlotte, NC.
1. Dickerson, D. L. & Dawkins, K. R., (2001). *Technology as a support mechanism for Earth-View*. Poster presented at Instructional Technology-Expo, North Carolina State University. Raleigh.

### **Grants Awarded (23):**

23. Sedwick, P. (PI) & Dickerson, D.L. (Senior Personnel). (02/01/16-01/31/19). NSF PLR – Antarctic Ocean and Atmospheric Science. Impact of Convective Processes and Sea Ice Formation on the Distribution of Iron in the Ross Sea: Closing the Seasonal Cycle (PIPERS). National Science Foundation. \$394,174.00. Submitted 04/15/15.
22. St. Laurent, P. (PI), Dickerson, D.L. (Co-PI), & Hofmann, E. (Co-PI). (7/15/15-7/14/17). NSF PLR - Antarctic Ocean and Atmospheric Science. Collaborative Research: Investigating the Role of Mesoscale Processes and Ice Dynamics in Carbon and Iron Fluxes in a Changing Amundsen Sea (INSPIRE). National Science Foundation. \$154,951.00. Submitted 04/15/14.
21. Loney, M., Garner, J., Whittecar, G., & Perry, T. (05/01/15-09/30/18). Knowledge through Experience for Youth in Science KEYS. VA Dept. of Education - MSP Program. Virginia Department of Education. \$471,961.00. Submitted 03/30/15. \* Dickerson, D.L. (Evaluator)
20. Garner, J. (PI), Whittecar, G. (Co-PI), & Dickerson, D.L. (Co-PI). (03/01/15-9/30/16). *Building Bridges*. Virginia Department of Education – Math Science Partnership. \$406,121. Submitted on 12/01/14.

19. Hofmann, E. (PI) & Dickerson, D. (Senior Personnel). (06/01/14-05/31/16). *Engaging Community College Interns in Marine Infectious Disease Research* (OCE-1216220). National Science Foundation – Ecology and Evolution of Infectious Diseases (NSF 11-580) Supplemental Award. \$83,465.00. Submitted 5/1/14.
18. Dickerson, D.L. (PI), Katsioloudis, P. (Co-PI), Hofmann, E. (Co-PI), Garner, J. (Co-PI), & Sanzo, K. (Co-PI). (07/01/14-06/30/17). *Policy-Ready Citizen Science*. National Oceanographic and Atmospheric Administration – Chesapeake Bay Watershed Education and Training. \$300,000. Submitted 01/28/14. NA14NMF4570263
17. Garner, J. (PI), Whittecar, G. (Co-PI), & Dickerson, D.L. (Co-PI). (03/01/14-9/30/15). *Project D'n'A: Building Blocks for Middle School Science Literacy*. Virginia Department of Education – Math Science Partnership. \$224,200. Submitted on 11/22/13.
16. Garner, J.K., Loney, M., Frank, G., Grant, L., Whittecar, R., Dickerson, D.L., (03/01/13-09/30/14). *Learning Enhanced through the Nature of Science: An Interdisciplinary Sustainable Professional Development Model for High School Science*. (\$259,174). Math Science Partnership, Virginia Department of Education. Submitted 11/29/12.
15. Dickerson, D.L., Burgin, S., & Pollock, A. (1/1/13-12/31/14). Virginia Department of Environmental Quality. *ODU NSTA Passive Sampling Project*. \$2100.
14. Fantz, T. (PI), Dickerson, D.L. (Co-PI), & Katsioloudis, P. (Co-PI). (4/20/12-12/31/13). Virginia Space Grant Consortium. *Fabrication using 3-D printers in space*. \$10,000.
13. Nelson, L. (PI) & Hathcock, S. (Co-PI). (3/1/11-9/1/11). Beasley Foundation, *RiverQuest*. \$50,000. \*Dickerson, D.L. (Evaluator).
12. Sedwick, P. (PI), Dinniman, M. (Co-PI), Hofmann, E. (Co-PI), Klinck, J. (Co-PI). (7/1/11 – 6/30/14). National Science Foundation – ANT (Antarctic Ocean and Atmospheric Sciences), *Collaborative Research: Impact of mesoscale processes on iron supply and phytoplankton dynamics in the Ross Sea* (ANT-0944174). \$325,834. \*Dickerson, D.L. (Senior Personnel).
11. Crum, K. (PI), Myran, S. (Co-PI), & Dickerson, D.L. (Co-PI). (3/1/11-9/30/12). Virginia Department of Education, *Partnership for Teaching and Leading a Quality Science Program*. \$155,856.
10. Graves, W. (PI), Judge, S. (Co-PI), Osgood, C. (Co-PI), Bountress, N. (Co-PI), Raspiller, E. (Co-PI), Wojtowicz, R. (Co-PI), Robinson, J. (Co-PI), Dickerson, D.L. (Co-PI), Katsioloudis, P. (Co-PI), Fleener, C. (Co-PI), Reed, P. (Co-PI),

McKinney, S. (Co-PI), Mathews, T. (Co-PI), Starling, C. (Co-PI), Hinton-Johnson, K. (Co-PI), Butler, C.J. (Co-PI), Oliver, M. (Co-PI), Pearson, K. (Co-PI), Adams, F. (Co-PI), Silva, K. (Co-PI), Chen (Co-PI), Dorrepaal (Co-PI), Zimmerman (Co-PI), and Finley-Croswhite (Co-PI). (10/01/09 – 09/30/14). U.S. Department of Education, *Old Dominion University Teacher Immersion Residency*. \$6,054,007.64. \*Dickerson from (10/01/09-12/31/10)

9. Verma, A.K. (PI), Dickerson, D.L., (Co-PI), McKinney, S., (Co-PI), & Bao, H., (Co-PI). (07/01/09 – 06/30/12). National Science Foundation – ATE, *Marine career tech (MCTech): STEM careers in shipbuilding and marine industry (NSF0903255)*. \$818,536.
8. Dickerson, D.L. (PI), Hofmann, E. (Co-PI), McKinney, S. (Co-PI), Klink, J. (Co-PI), & Nelson, L. (Co-PI). (07/01/09-06/30/12). National Oceanic and Atmospheric Administration – BWET, *Science education advancing research of the Chesapeake Bay and its habitats (NA09NMF4570008)*. \$165,305.
7. Verma, A.K. (PI), McKinney, S. (Co-PI), Dickerson, D.L. (Co-PI), & Brown, N. (Co-PI). (01/01/09 – 01/01/12). National Science Foundation – DRL ITTEST, *MarIneTech: STEM preparation through marine engineering, science, and technology experiences (NSF0833570)*. \$1,273,308.
6. Johnson, R. (PI). (08/01/08 – 07/31/09). Institute of Museum and Library Services, *Connecting learners digitally through Internet 2*. \$122,832. \* Dickerson, D.L. (Evaluator).
5. Verma, A.K. (PI), McKinney, S. (Co-PI), & Dickerson, D.L. (Co-PI). (07/01/08 - 09/30/09). State Council of Higher Education for Virginia, *MarineTech: STEM preparation through marine science/engineering projects*. \$120,000.
4. Nieber, D. (PI). (12/31/06 – 12/30/07). Arthur Vining Davis Foundation, *A sea of possibilities: A pilot project to link tomorrow's teachers with today's scientists*. \$150,000. \* Dickerson, D.L. (Senior Personnel).
3. Dickerson, D.L. (PI). (01/01/08 - 06/01/08). Old Dominion University, *FP3 Grant*. \$7,500.
2. Dickerson, D.L. (PI) & Stewart, C.O. (Co-PI). (05/01/07 – 12/31/07). Old Dominion University – SEECR Grant, *Framing science: Educational and rhetorical perspectives and outcomes*. \$17,000.
1. Dickerson, D.L. (PI). (08/01/05 – 12/31/05). Old Dominion University - Faculty Innovator Grant, *Teaching science through authentic scientific inquiry using mobile technologies*. \$3,000.

**Grants Applied For:**

**Pending:**

Hofmann, E. (PI), Klinck, J. (Co-PI), Dinniman, M. (Co-PI), & Dickerson, D. (Co-PI). (02/01/16-01/31/19). NSFGE0-NERC: Collaborative Research - Bloom Initiation Dynamics in the Ross Sea (BID-RS). National Science Foundation. \$413,311.00. Submitted 04/15/15.

Hofmann, E., Klink, J. & Dickerson, D. (06/01/15-05/31/18). CNH-L: Managing marine disease for improved fisheries and ocean ecosystems. National Science Foundation. \$305,574.00. Submitted 11/06/14.

Garner, J. (PI), Nunnery, J. (Co-PI), Arnold, P. (Co-PI), Perez, T. (Co-PI), & Dickerson, D. (Co-PI). (1/1/15-12/31/19). *Investing in Innovations Grant: Transformation, Identification, Discovery and Engagement in STEM (TIDES)*. US Department of Education. \$2,998,636.00. Submitted 8/11/14.

**Not Funded (since tenure was awarded \* Senior Personnel \*\*\*\* Selected for funding):**

Burgin, S., Dickerson, D., Gauthier, D., & Hatcher, P. (06/01/15-06/01/18). STRATEGIES: SPECTRA: Participating in STEM Practices and the Exploration of Careers and Technology through Research Apprenticeships. National Science Foundation. \$970,631.00. Submitted 11/06/14.

Jovanovic, V., Michaeli, J., & Popescu, O. (09/01/14-08/31/16). *Collaborative Project: Girls in Engineering Education roBOTics Initiative (GEEBOT)*. National Science Foundation – AISL. \$178,049. Submitted 01/10/14. \*Dickerson, D.L. (Evaluator).

Katsioloudis, P., Dickerson, D.L., Jovanovic, V., Tomovic, C., & Tomovic, M. (09/01/14-08/31/17). *Collaborative Research: Strategies: Virtual Apprentice Experience (VitAe)*. National Science Foundation – ITEST. \$782,740. Submitted 02/10/14.

Dickerson, D.L., Katsioloudis, P.J., Jovanovic, V., Garner, J., & Burgin, S. (6/1/14-5/31/17). *Development of a Replicable Integrated STEM Model for Science Teachers: Instrumental STEM (iSTEM)*. National Science Foundation – DRK12. \$449,917. Submitted 12/9/13.

Jovanovic, V., Katsioloudis, P., Tomovic, M., & Dickerson, D.L. (8/16/14-8/16/17). *Collaborative Project: Higher Education Pathways for Maritime Mechatronics Technicians (MechTech)*. National Science Foundation – ATE. \$399,467. Submitted 10/17/13.

Burgin, S.R., Dickerson, D.L., Gaff, H., & Gauthier, D. (2013). Virginia Department of Education Mathematics and Science Partnership (MSP). Project ABLE (Authentic

Biology Learning Experiences): Conceptual modeling in biological sciences for teachers and students. \$111,123. Submitted 11/22/2013.

- Katsioloudis, P., Dickerson, D.L., Jovanovic, V., Tomovic, C., & Michaeli, J. (01/02/2014-12/31/2016). *NAVAL Professionals DEbriefing - NAVAL PRIDE*. Office of Naval Research. \$595,127. Submitted 09/25/13.
- Klinck, J., St. Laurent, P., Dinniman, M., & Dickerson, D.L. (04/01/14-04/01/17). *A Fresher Western Antarctica: Impacts of Accelerating Ice Shelf Melt on Vertical Exchanges and the Coastal Ocean Circulation*. National Science Foundation – OCE. \$293,750. Submitted 08/15/13.
- Garner, J.K., Whittecar, R., Dickerson, D.L., Kaplan, A., Frank, G., Lyle, M., Clements, C., Younger, B., Stemple, F., (2012). *Learning Enhanced through the Nature of Science (LENS): A Complexity Science Approach to Science Teacher Professional Development*. (\$450,000) National Science Foundation. Submitted 12/05/12.
- Powell, E., Cai, W., Soniat, T., Klinck, J., & Mann, R. (07/01/13-06/30/17). *COASTAL SEES (Track 2), Collaborative: The Scientific and Socioeconomic Challenges of Managing Carbonate in the Coastal Zone*. National Science Foundation. \$426,628. Submitted 01/16/13. \*Dickerson, D.L. (Senior Personnel).
- \*\*\*\*Dickerson, D.L., Katsioloudis, P., Hofmann, E., & Nelson, L. (07/01/13-06/30/16). *Policy-Ready Citizen Science*. National Oceanic and Atmospheric Administration. \$319,308. Submitted 12/19/12. \*\*\*This proposal was selected for funding but was not awarded based on availability of funds.
- Katsioloudis, P., Dickerson, D.L., Jovanovic, V., Tomovic, C., & Fantz, T. (5/16/13-05/15/16). National Science Foundation – ITEST Program. Strategies: Collaborative Research: Virtual Apprentice Experience (VitAe). \$871,410.00. Submitted 11/09/12.
- Dickerson, D.L., Katsioloudis, P., Fantz, T., Burgin, S., & Sanzo, K. (01/01/13-12/31/15). National Science Foundation – ITEST Program. *Instrumental STEM (iSTEM)*. \$848,027. Submitted 11/13/12.
- Meadows, G., Hammond, D., & Dickerson, D.L. (06/15/13-06/15/16). National Science Foundation – ATE Program. *Collaborative project: Creating a meta-makerspace for community colleges and universities*. \$626,088.00. Submitted 10/18/12.
- Katsioloudis, P., Sakhel, K., Jeng, A., Jovanovic, V., Dickerson, D.L., & Abuhamad, A. (01/01/13-12/01/13). Old Dominion University Multidisciplinary Seed Funding Program. *Comparative analysis and prevention of surgical smoke effects (CAPSS)*. \$50,000. Submitted 10/26/12.



- Fantz, T., Dickerson, D.L., & Katsioloudis, P. (8/1/12-8/15/13). National Space Grant Foundation. Exploration Habitat (X-Hab) 2013 Academic Challenge. \$40,000. Submitted 5/2/12.
- Reed, P. (PI), Dickerson, D.L. (Co-PI), Enderson, M. (Co-PI), & Bondi, S. (Co-PI). (07/01/12-09/30/13). Virginia Department of Education. Engineer Virginia (EVA). \$418,946. Submitted 12/15/11.
- Wu, H. (PI), Xu, L. (Co-PI), Li, L. (Co-PI), Watson, S. (Co-PI), Abdous, M. (Co-PI), Richels, C. (Co-PI), Dickerson, D.L. (Co-PI), Greene, L. (Co-PI). (07/01/12-06/30/15). US Department of Education. An online tacit knowledge-transferring tool for novice science teachers who teach students with disabilities. \$614,881. Submitted 09/22/11.
- Mulholland, M. (PI). (03/01/12-02/28/15). National Science Foundation. Collaborative research: Impacts of atmospheric nitrogen deposition on the biogeochemistry of eastern North American coastal. \$689,508. \*Dickerson, D.L. (Senior Personnel). Submitted 8/15/11.
- Nunnery, J. (PI), Yen, C. (Co-PI), Dickerson, D.L. (Co-PI), Bol, L. (Co-PI), Garner, J., Byrd-Poller, L., & Arnold, P. (7/1/11-7/1/15). National Science Foundation, A cluster randomized control trial of the efficacy of the National Math and Science Initiative's AP Training and Incentives Program. \$1,881,346.
- Dickerson, D.L. (PI), Adcock, A. (Co-PI), Greenwood, J. (Co-PI), Greenwood, J. (Co-PI), & Stewart, C. (Co-PI). (05/01/11-05/01/16). National Science Foundation, *Stewardship 2.0*. \$2,777,176.
- Dickerson, D.L. (PI), Hofmann, E. (Co-PI), Nelson, L. (Co-PI), Katsioloudis, P. (Co-PI), & Haun-Frank, J. (Co-PI). (8/1/11-7/31/14). National Oceanographic and Atmospheric Administration, *Project SEARCH 2.0*. \$645,903.
- Mulholland, M. (PI). (5/1/11-4/30/14). National Science Foundation, *Collaborative Research: Impact of atmospheric deposition on the biogeochemistry of Eastern North American coastal waters*. \$616,152. \* Dickerson, D.L. (Senior Personnel).
- Verma, A.K. (PI), Lin, C.Y. (Co-PI), McKinney, S. (Co-PI), & Dickerson, D.L. (Co-PI). (07/01/09-09/30/10). State Council of Higher Education for Virginia – NCLB, *RoboTech: Enhancing STEM skills through robotics*. \$141,511.
- Dickerson, D.L. (PI). (07/01/09 – 06/30/11). National Aeronautics and Space Administration – Global Climate Change Education, *Telling the story of my place: Exploring connections between global climate change and local environments*. \$149,950.

**Research and Manuscripts in Progress:**

**Research Areas:**

STEM Education (2011-present) Involves research regarding the development and testing of STEM instructional models, workforce pipelines, and instructional tools.

Citizen Science (2011-present) Examines how the use of “policy-ready citizen science” impacts environmental stewardship attitudes and behaviors among children and adults.

Rhetoric in Science Education (2007-present) Examining how rhetorical elements impact the teaching and learning of science in formal and informal contexts.

Earth/Environmental Science Content Understandings (Summer 2002 - present) Involves research focused on elementary, secondary, and post-secondary students' understandings of groundwater and environmental science issues.

**Manuscripts in Progress:**

Journal:

McConnell, W. & Dickerson, D.L. (In Review). *The Impact of 3D Printing Technologies on Student Participation in a Middle School Life Science Lesson*. International Journal of Science Education.

Stewart, C.O., McConnell, III, J.R., & Dickerson, D.L. (In Review). *Deference to scientific authority and support for science across domains: Influences of science education and religiosity*. Public Understanding of Science.

McConnell, W. & Dickerson, D.L. (In Review). *Presenting the future with 3D printing*. Science Scope.

McAllister, M. and Dickerson, D.L. (In Review). *Exploring conceptual understandings of groundwater through students' interviews and drawings*. Spectrum.

Hathcock, S. J., Dickerson, D., Hofmann, E., & Klinck, J. (In Review). Real-world STEM: Explorations in field-based oceanography. The Science Teacher.

Stewart, C., Dickerson, D., Hathcock, S., Weston, J., & Minogue, J. Predicting undergraduate students' beliefs about science: An exploratory study using the Thinking about Science Survey Instrument (TSSI). Science Communication.

Hotchkiss, R., Dickerson, D., Bol, L., & McConnell, W. (In Review). *Development and validation of an instrument to assess elementary teachers' views of environmental education*. Journal of Geoscience Education.

Horne, P., Dickerson, D., Bol, L., Butler, L., & Hotchkiss, R. *Urban elementary students' views of environmental scientists, environmental caretakers, and environmentally responsible behaviors.*

Horne, P., Dickerson, D., Bol, L., Butler, L., & Hotchkiss, R. *High school students' argument development in response to media stories about local science issues.*

**Memberships in Professional Societies:**

Association of Science Teacher Education

National Association for Research in Science Teaching

National Association of Geoscience Teachers

National Science Teachers Association

Virginia Science Educators Leadership Association

Virginia Science Teachers Association

Virginia Earth Science Teachers Association

North American Association for Environmental Education

American Educational Research Association

Division: K – Teaching and Teacher Education

SIG: Ecological and Environmental Education

SIG: Science Teaching and Learning

SIG: Religion and Education

**University Service:**

**Major university, college, and department committee assignments:**

**University:**

Mitigation and Adaptation Research Institute (MARI) (Spring 2014 – Summer 2015)

Point of Contact for the VA STEAM Academy for the University (Fall 2013 – Summer 2015)

Industrial and Scientific Research Center – Founding Member and Science Consultant (Spring 2012 – Summer 2015)

Innovation and Design Center (now called The Lab at TCEP) – Founding Member and Co-Director (Science) (Fall 2011 – Summer 2015)

University Committee H - Nominations and Elections (Spring 2008 – Summer 2015)

Council of Teacher Education (Spring 2005 - Fall 2012)

Climate Change Working Group – Member (Spring 2011 – Fall 2012)

COACHE Committee – Member (Spring 2011 – Spring 2012)

University Strategic Planning Committee: Education Outcomes and Student Experience - Undergraduate Committee (Spring 2009 – Fall 2010)

Student Affairs Focus Group (Summer 2007)

NCATE Data Collection Point Person for Middle School - CofC (2004)

Served on Search Committee for shared Technology Position - CofC (2004)

Library Committee - CofC (2003-2004)

Technology Advisory Committee - CofC (2003-2004)

**College:**

WEAVE for Secondary Science Education (Fall 2010 – Summer 2015)

ODU Teaching and Learning PhD Committee (August 2009 – Summer 2015)

NCATE for Secondary Science Education (Fall 2010 – Summer 2015) (**Nationally Recognized**)

Faculty Advisor for Student Chapter of NSTA (Spring 2011 – Spring 2014)

STEMPS Advisory Committee – Member (Fall 2011 – Spring 2012)

ODU/Norfolk Public Schools Committee – Member (Summer 2011 – Spring 2012)

IRB Review for College of Education (Fall 2010 – Spring 2012)

Visiting speaker in Sue Kimmel's Introductory TLCI Doctoral Class (Spring 2012)

Governing Council of the Virginia Mathematics and Science Coalition (VMSC) Statewide Masters Program (Summer 2006 – Fall 2009)

**Department:**

School Planning and Management Team for the new Lafayette Winona School. Grades 3-8 with pre IB and STEM emphasis (Fall 2014 – Summer 2015)

Graduate Program Director (Summer 2014 – Summer 2015)

STEMPS Department Library Liaison (Fall 2013 – Summer 2015)

Curriculum Committee (Fall 2012 – Summer 2015)

Serve as mentor to Dr. Stephen Burgin (Fall 2012 – Summer 2015)

Science Education Program Leader (Fall 2012 – Summer 2015)

STEM Education Graduate Committee (Fall 2012 – Summer 2015)

STEMPS Department Promotion and Tenure Committee (Summer 2009 – Summer 2015)

Advisory Board for the Elementary/Middle School Education Program (Summer 2006-  
Summer 2015)

Chair of Search Committee for Science Education Position in STEMPS (Fall 2013 –  
Spring 2014)

Attended UTeach Conference, Austin, TX (Summer 2013)

Chair of Search Committee for Elementary Science Education Position in STEMPS (Fall  
2011 – Spring 2012)

STEMPS Department Budget Committee (Fall 2009 – Spring 2010)

Chair of Search Committee for Elementary Science Education Position in STEMPS (Fall  
2009 – Spring 2010)

STEMPS Department Space Committee (Summer 2009 – Fall 2010)

ECI Methods and Practica Coordination Committee (Fall 2008 – Fall 2009)

ODU Education Curriculum and Instruction PhD Committee (Spring 2006-Fall 2009)

Scholarship Committee (Fall 2006 – 2009)

Mathematics Education Search Committee (2005)

**Professional Service:**

**Service in federal agencies:**

National Oceanographic and Atmospheric Administration  
*Participated in the National Stakeholder Forum (2 Dec 2009)*

National Science Foundation  
*Served on Proposal Review Panel (Fall 2009)*

**Service in state agencies:**

VISTA  
*Participated (attendee) in the Science Educator Faculty Academy and also presented regarding grant writing (19-23 May 2014)*

Virginia Department of Environmental Quality  
*Participated (attendee) in the Citizen Science Webinar (4 March 2014)*

**Service in professional organizations:**

Association for Science Teacher Education  
*Committee Member - Professional Development (2003-2006, 2006-2009, 2009-2013)*  
*Reviewed Conference Workshops for Annual Conference (2006-2012)*  
*Severed as a Mentor for ASTE Graduate Student Members (2011)*  
*ASTE Conference Thread Coordinator (2006-2007, 2007-2008, 2009-2010)*  
*Reviewed for Annual Conference (2005-2010)*

National Association for Research in Science Teaching  
*Membership and Elections Committee - Member (2014-2017)*  
*Mentor-Mentee Nexus (2014, 2015)*  
*Reviewed for Science Education (2010)*  
*Ad Hoc Committee on Practitioner Research - Member (2002-2008)*

National Association of Geoscience Teachers  
*NAGT James Shea Award Committee Member (2013-2014)*  
*Editor for Curriculum and Instruction (2012-2014)*  
*Associate Editor for the Journal of Geoscience Education (2009-2011)*  
*Reviewed for the Journal of Geoscience Education (2006, 2008)*

National Science Teachers Association  
*Faculty Advisor for Student Chapter (Spring 2011-Summer 2015)*  
*Reviewed books for NSTA Press (2009)*

School Science and Mathematics Association  
*Reviewed for the journal School Science and Mathematics (2010)*

Virginia Science Teachers Association  
*Committee Member – College Committee (2008-2015)*

Virginia Science Educators Leadership Association  
Reviewed State Regulations changes (Spring 2013)

Additional Journals for Which I Reviewed

*Research in Science Education* (2014)

*Science Education* (2012)

*Journal of Computing in Higher Education* (2010)

*School Science and Mathematics* (2010)

### **Community Service:**

#### **Involvement in extension and public service activities:**

K-12 Classroom Teaching (Spring 2015) Taught lesson on density and buoyancy at Gates County High School.

Career Day (Spring 2015) Shared information about the ODU STEM Education Department and programs at Central Middle School.

Norfolk Public Schools Curriculum Planning Committee (Fall 2014 – Summer 2015) Served by providing perspectives regarding 3<sup>rd</sup> -8<sup>th</sup> grades pre IB science.

STEM Day (Spring 2014) Shared information about the ODU STEM Education Department and programs at the Portsmouth Public Schools STEM Day. Additionally, I involved ODU students in conducting activities with children and adults.

K-12 Career Day (Spring 2014) Provided information regarding programs in the College of Education to students and staff at Gatesville Elementary School.

Science Fair Judging (Spring 2014) Assisted in the preparation of the Tidewater Science and Engineering Fair.

Teacher Professional Development (Fall 2013) Provided professional development sessions for science teachers in Portsmouth Public Schools regarding 5E Learning Cycles and the Next Generation Science Standards.

K-12 Classroom Teaching (Fall 2013) Taught lessons on density and buoyancy at Greenbrier Intermediate School for their STEM & M Night.

K-12 Classroom Teaching (Spring 2013) Taught lessons on density and buoyancy at Nansemond-Suffolk Academy for their parent/student Science Night.

STEM Day (Spring 2013) Shared information about the ODU STEM Education Department and programs at the Portsmouth Public Schools STEM Day.

Additionally, I involved ODU students in helping to conduct the Build A Buoy Activity with children and adults.

K-12 Classroom Teaching (Fall 2012) Taught lessons on density and buoyancy at Greenbrier Intermediate School for their STEM & M Night.

Millpond Day (Spring 2012) Led NSTA ODU Student Chapter in science activities at a public state park festival at Merchants Millpond State Park

Virginia Resource-Use Education Council (Fall 2011) I participated in the Fall 2011 Environmental Education Leadership Meeting in Williamsburg, VA. This Council is under the VA Dept of Environmental Quality.

Virginia Resource-Use Education Council (Summer 2011) I was voted in as a full member of VRUEC for ODU. I participated in the 2011 Environmental Education Leadership Meeting in Richmond, VA. This Council is under the VA Dept of Environmental Quality.

K-12 Classroom Teaching (Spring 2011) Taught lessons on density and buoyancy at Gatesville Elementary School (4<sup>th</sup> grade).

Environmental Education Program Development (Spring 2011 – Fall 2011) Collaborate with Norfolk Public Schools' Camp Young to develop environmental education curricula

K-12 Classroom Teaching (Spring 2011) Taught lessons on density and buoyancy at Nansemond-Suffolk Academy for their parent/student Science Night.

Science Fair Judging (Spring 2011) Judged the Fairlawn Elementary School Science Fair.

Virginia Climate Education (Spring 2011) I participated as a charter member of the organization, which holds monthly meetings on Climate Change resources. This Council is under the VA Dept of Environmental Quality.

Virginia Resource-Use Education Council (Spring 2011) I participated in the 2011 Environmental Education Leadership Meeting in Richmond, VA. This Council is under the VA Dept of Environmental Quality.

Professional Development for Area Teachers (Fall 2010) Presented a 1.5 hour presentation regarding STEM integration using buoys for Chesapeake Public School secondary science teachers at Oscar Smith High School.

Virginia Resource-Use Education Council (Fall 2009) I was invited to become a member and participated in the 2009 Environmental Education Leadership Meeting in Jamestown, VA. This Council is under the VA Dept of Environmental Quality.



Virginia Department of Education Standards of Learning (SOL) Review Process (Summer 2009) Served on the Earth Science Committee to review K-12 Earth Science SOL in Stafford, VA

Professional Development for Area Teachers (Fall 2008) Co-presented (with Frank Stonier and Patti Horne) two, 1.5 hour presentations regarding technology in science education for Chesapeake Public School secondary science teachers at Oscar Smith High School.

Merchants Millpond State Park Advisory Committee (Summer 2008 – Summer 2011) Serve as a member of the Park Advisory Committee as the Education representative

K-12 Classroom Teaching (Spring 2008) Taught Second Grade science lesson on Groundwater at Norview Elementary School

K-12 Classroom Teaching (Spring 2008) Taught AP Environmental Science lesson on Groundwater at Nansemond-Suffolk Academy

Science Fair Judging (Spring 2008) Judged the Norfolk Public Schools Science Fair at Nauticus.

Science Fair Judging (Fall 2007) Judged the Forest Glen Middle School Science Fair.

Professional Development for Area Teachers (Fall 2007) Conducted three, one-hour presentations regarding alternative assessment for Suffolk Public School K-12 teachers during “Raising Achievement and Closing the Gaps Symposium” at Kings Fork High School.

Collaborative Partnership with Portsmouth Public Schools (Fall 2007) Met with Laura Nelson to begin working on a partnership to provide opportunities for elementary preservice science teachers to engage in enhanced practicum experiences with urban students at Victory Elementary School.

K-12 Classroom Teaching (Summer 2007) Taught selected Kindergarten science lessons at Gatesville Elementary School

Science Fair Judging (Spring 2007) Judged, along with students in my elementary methods course, the Norfolk Public Schools Science Fair.

Professional Development for Paraprofessionals (Summer 2006) Taught session entitled, *Inquiring Minds Want to Know*, at the Norfolk Public Schools Paraeducators Academy at Lake Taylor High School

Science Fair Judging (Spring 2006) Judged 5<sup>th</sup> grade science fair projects for Driver Elementary School, Suffolk, VA

Professional Development for Area Teachers (Summer 2005) Invited to provide professional development regarding groundwater and earth science education related content by the Virginia Department of Environmental Quality

K-12 Classroom Teaching (Spring 2005) Taught selected 4<sup>th</sup> grade science lessons with an in-service teacher at Gatesville Elementary School

Science Fair Judging (Spring 2004) Judged 3<sup>rd</sup> grade science fair projects for St. Andrews Elementary Math and Science Magnet, Charleston, SC

Science Fair Judging (Spring 2004) Judged 5<sup>th</sup> grade science fair projects for Ladson Elementary, Charleston, SC

Mentor for Secondary Science Teachers (2002 - 2004) Serve as an E-Mentor for two secondary science teachers in North Carolina by assisting them in the development and preparation of science lessons. Communications with mentees occurs via email.

Instructional Technology Assistant Program (ITAP) (2001-2003) Responsibilities include providing technological and instructional assistance to faculty at NCSU.